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(54) **Encoding and decoding of multi-channel audio signals based on a main and side signal representation**

(57) A method of encoding multi-channel audio signals comprises generating of a first output signal (x'_{mono}), being encoding (38) parameters representing a main signal (x_{mono}). The main signal (x_{mono}) is a first linear combination (34) of signals (16A, 16B) of at least a first and a second channel. The method further comprises generating (30) of a second output signal (p_{side}), being encoding parameters representing a side signal (x_{side}). The

side signal (x_{side}) is a second linear combination (36) of signals (16A, 16B) of at least the first and the second channel within an encoding frame. The method is characterised in that the generating of the second output signal further comprises scaling of the side signal (x_{side}) to an energy contour of the main signal (x_{mono}). A method of decoding is also presented as well as an encoder, a decoder and audio system, all according to the same basic idea.

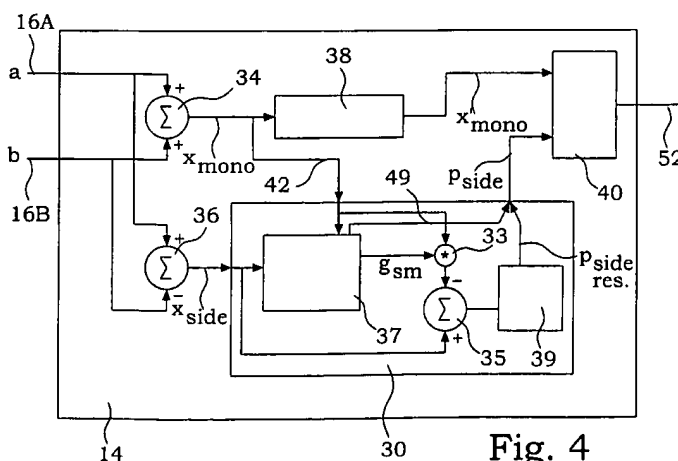


Fig. 4



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 10 9801

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
D,A	US 5 434 948 A (HOLT CHRISTOPHER E [GB] ET AL) 18 July 1995 (1995-07-18) * figures 1,2 * * column 4, line 50 - column 5, line 46 * -----	1,5,9, 13,17	INV. G10L19/00 ADD. H04S3/00
A	HERRE J ET AL: "COMBINED STEREO CODING" PREPRINTS OF PAPERS PRESENTED AT THE AES CONVENTION, vol. 93, no. 3369, 1 October 1992 (1992-10-01), pages 1-18, XP009025132 * Page 3 - Section "M/S Stereo Coding" * * figures 2,3 *	1,5,9, 13,17	
A	TED PAINTER ET AL: "Perceptual Coding of Digital Audio" PROCEEDINGS OF THE IEEE, IEEE. NEW YORK, US, vol. 88, no. 4, April 2000 (2000-04), XP011044355 ISSN: 0018-9219 * paragraph [III.E] * -----	1,5,9, 13,17	
			TECHNICAL FIELDS SEARCHED (IPC)
			G10L H04S
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 26 September 2007	Examiner Krembel, Luc
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

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